

NH Climate Change Action Plan DRAFT Action Report

EGU Action 2.7 – Regulated Low- and Non-CO₂-Emitting Supply-Side Resources

Summary

As noted in EGU Action 2.4, society needs to move away from carbon-based supply-side resources and towards generating facilities that are low- or non-CO₂-emitting. Although significant and increasing resources will be deployed to reduce electrical demand through greater energy efficiency, clean distributed generation and efficient co-generation projects, the current level of generating resources will be needed to bridge the transition from today's balance of supply and demand to a low-carbon emissions future. As efforts continue in improving efficiency and reducing demand, the overall strategic plan must also anticipate load growth. Also, it should be acknowledge that the resources and experience of regulated utilities with generation provide local resources available to construct clean, new generating facilities. New Hampshire's planning efforts cannot stand in isolation and should be coordinated with other states and Canada. Similarly, New Hampshire's planning efforts should not overlook the significant resource its regulated generation can provide in the development of new renewable generation. Key aspects of achieving this goal include removing obstacles affecting energy facility siting, and transmission infrastructure, as well as, providing clarifying legislation that gives regulated utilities authority to construct and/or acquire renewable generating assets.

Program Description

1. Mechanism (*i.e., how the policy or program achieves the desired result*): Barriers must be removed to allow low- and non-emitting generation technology to be built including clarifying the current NH law which addresses regulated generation's authority to construct or acquire generation. Regulated utilities can and should have the authority to provide their customers additional, new renewable generation while at the same time broadening the potential builders of renewable generation. There is a critical need to address additional generation requirements with a portfolio of renewable generation, such as at least one 50 MW biomass plant, up to three 20-25 MW distributed generation units to help meet peak load requirements, up to 12 MW of photovoltaic (solar) cells, and up to six 24 MW wind projects. These efforts will complement increasing energy efficiency and demand-side programs while providing a balanced generation portfolio and keeping customers' best interests in mind. This approach adds more local, New Hampshire renewable generation, while supporting the regional effort to develop more renewable generation. Again, while addressing supply needs, it is imperative that electrical transmission capability within the state be enhanced and increased to support the development of new low- or non- CO₂-emitting generation.
2. Implementation Plan (*i.e., how to implement the specific policy or program*)
 - a) *Method of Establishment (e.g., legislation, executive order)*
 - I. Seek legislation to clarify a regulated utilities authority to construct and or acquire renewable generation.
 - II. Establish streamlined state and local permitting processes. Consider an expedited process for smaller generation facilities using renewable resources.

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- III. Provide for expedited PUC proceeding schedules when held prior to commencement of a project and construction
- b) *Resources Required:* NH Legislature, state government, PUC, NHDES, and local governing bodies must align support of such applications.
- c) *Barriers to Address:* Eliminate barriers for regulated utilities to construct new, clean generation.
 - I. Establish clear legislation authorizing regulated utilities to construct or acquire renewable generation.
 - II. Address obstacles to speedy and efficient project review at the state and local levels.
 - III. Address transmission infrastructure limitations, including the Coos County loop in northern New Hampshire
- 3. Parties Affected by Implementation (*i.e., residents, businesses, municipalities, etc.*):
 - a) *Parties Responsible for Implementation:* State legislature, NHDES, PUC, New Hampshire Site Evaluation Committee, and regulated utilities.
 - b) *Parties Paying for Implementation:* Customers of the regulated utility would pay the cost to construct new generation facilities. Customers in New Hampshire and potentially throughout New England would pay for enhanced transmission;
 - c) *Parties Benefiting from Implementation:* Customers of the utility would benefit from associated cost savings (e.g. lower compliance costs, avoidance of higher cost market purchases, etc.) All citizens would benefit from reduced CO₂ emissions.
- 4. Related Existing Policies and Programs (*i.e., those that address similar issues without interacting*):
- 5. Complementary Policies (*i.e., those that achieve greater reductions through parallel implementation*):
 - a) Encourage the expansion of regulated generation to include additional renewable generation.
 - b) Enable the development of transmission resources in northern New Hampshire to facilitate renewable power transfers to southern New Hampshire. Also, transmission facilities should be installed to allow clean energy purchases. (See Senate Bill 383.)
 - c) Allow the deployment and installation of clean small scale distributed energy and heat producing generating facilities. (See Senate Bill 451.)
 - d) Evaluate the retention of existing nuclear power generation facilities into the future. This form of generation is considered in detail as a separate item (see EGU Action 2.5 – Nuclear Power Capacity).

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6. Timeframe for Implementation: Begin in 2008 by passing appropriate legislation to clarify regulated generation's authority to build new generation.
7. Anticipated Timeframe of Outcome: Pass enabling legislation in 2009. Incent the construction of facilities to be on-line in support of New Hampshire's stated goal of a 25-percent reduction in carbon emissions by 2025 thus encouraging the development of -.
 - a. 50 MW by 2012 - biomass
 - b. 200 MW by 2025 – biomass, wind, and other
 - c. 400 MW by 2050 – biomass, wind and other

Program Evaluation

Value analysis of electric rate change versus environmental benefit must be weighed for each program or project.

1. Estimated CO₂ Emission Reduction –

- a) (2012): 0.14 MMTCO₂e
- b) (2025): 0.56 MMTCO₂e
- c) (2050): 1.12 MMTCO₂e

2. Economic Effects

A reasonable assumption is that certain carbon based fuels will reduce in availability into the future based on limited supply or cost. As this occurs, energy prices will increase proportionately. An important component of a core strategy to manage future energy costs is to diversify the supply mix and have less carbon-based supply facilities. This is accomplished by building low and non-carbon emitting generating facilities over the next five to ten years. These investments will assist in stabilizing rates into the future and be sound investments to meet increasing demands for carbon-free energy. These investments will also provide high value to the New Hampshire economy by material procurement and wages for local craftsmen. This, in turn, becomes a positive approach which benefits local town(s) and state economy. Finally, these plants will reduce future energy costs with savings returned to the customers.

a) Costs

- I. (2012): Low
- II. (2025): Low
- III. (2050): Low

b) Savings (\$)

- I. (2012): Moderate
- II. (2025): Moderate
- III. (2050): Moderate

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3. Other Benefits/Impacts

- a) *Environmental:* The proposed action will reduce emissions of carbon dioxide and other greenhouse gases and primary air pollutants that contribute to climate change and damage our ecosystems. Emission reductions will directly improve air and water quality while indirectly benefitting the fish, wildlife, and ecosystems that depend on clean air and water.
- b) *Health:* Particulate matter and ozone precursors such as VOCs and NO_x contribute to cardiac and respiratory ailments in humans and adversely affect the health of other living organisms. In particular, ozone formation increases dramatically during hot weather. Therefore, measures that mitigate climate warming by reducing harmful emissions will also be beneficial to the health of human populations and ecosystems in general.
- c) *Social:* Programs that promote environmental sustainability by conserving natural resources and reducing emissions have immediate and long-term benefits to society. Increased public awareness arising from such programs will help to alleviate climate change. Programs involving energy conservation and some alternative generation technologies have relatively short payback periods. These programs bolster the local economy in a number of ways: they produce “green” jobs, free up money that can be reallocated to other purposes, and result in greater economic security overall.
- d) *Other:* Energy efficiency and emission reductions will reduce the load on our aging infrastructure and will create demand for alternative technologies in the U.S. marketplace.

4. Potential for Implementation (*i.e., including challenges, obstacles and opportunities*)

- a) *Technical:* Pending plans to construct facilities can be implemented relatively easily once siting and transmission policy issues are addressed.
- b) *Economic:* New facilities will create many construction jobs, long-term employment and tax revenue which will have a positive impact on the state’s economy and will avoid fuel expenses being paid to other states and countries.
- c) *Statutory/Regulatory:* The Legislature and Commission has the authority to approve most needed changes. If NH attempts to socialize the costs of transmission improvements across New England, the ISO and/or FERC will need to be involved.
- d) *Social:* Increased energy efficiency provides a variety of societal benefits, including cleaner air and lower energy costs. The effectiveness of energy efficiency programs, and the degree to which the public embraces them, will depend on the details of their design and implementation.

5. Other Factors of Note:

6. Level of Group Interest:

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7. References:

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